CLAIMS:

1. A method of curing a radiation-curable fluid, the method including:

emitting radiation from a radiation source towards the fluid to be cured, wherein at least 90% of the radiation has a wavelength in a band having a width of less than 50nm; and

providing an inerting environment in the region of the radiation source.

2. A method according to claim1, further including the step of applying the fluid to a substrate, the radiation being emitted towards fluid on the substrate, wherein an inerting environment is not provided in a region where the fluid is being applied to the substrate.

3. A method according to claim 1 or claim 2, further including providing a shroud in the region of the radiation source.

4. A method according to any preceding claim, the method further including the step of providing a nitrogen inerting environment.

5. A method according to any preceding claim, including the step of feeding a low oxygen gas to a region adjacent the source.

6. A method according to any preceding claim, further including providing a gas curtain in front of the source.

7. A method according to claim 5 or claim 6 including providing a directable outlet for the low oxygen gas.

8. A method according to any preceding claim, including the step of supplying gas at a positive pressure in the region of the source.

9. A method according to any preceding claim, wherein the source is mounted in a cavity, the method including the step of positively pressurising the cavity.

10. A method according to any preceding claim, including cooling the source of radiation.

11. A method according to any preceding claim, wherein the radiation source includes an LED.

12. A method according to any preceding claim, wherein the LED emits UV radiation.

13. A method according to claim 12, the method including emitting radiation from an array of LEDs towards the ink.

14. A method according to any preceding claim, wherein the radiation is emitted from an elongate source.

15. A method according to claim 14, wherein the source comprises an array of LEDs and is moved relative to the ink to be cured in a cure direction, wherein the LEDs do not form a column substantially aligned with the cure direction.

16. A method according to claims 11 to 15, wherein the source comprises a plurality of rows of LEDs, wherein a row of LEDs is offset from an adjacent row of LEDs.

17. A method according to claim 16, wherein the source comprises N rows of LEDs, the LEDs of each row having a pitch of w along the row direction, and wherein each row of LEDs is offset by Yw/N from an adjacent row, wherein Y, w and N are integers.

18. A method according to any preceding claim, wherein the fluid comprises ink.

19. A method according to any preceding claim, wherein the fluid is adapted such that it is reactive when exposed to radiation of a predetermined wavelength.

20. A method according to any preceding claim, wherein the fluid is adapted such that it is only substantially reactive when exposed to radiation from the radiation source.

21. A method according to any preceding claim, wherein the fluid includes a component which is adapted to respond to radiation emitted by the radiation source.

22. A method according to any of claims 19 to 21, wherein the fluid includes a photoinitiator adapted to respond to radiation emitted by the source.

23. A method according to any of claims 19 to 22, wherein the fluid includes a photosensitiser adapted to respond to radiation emitted by the source.

24. A method according to any of claims 19 to 23, wherein the fluid includes a photosensitiser adapted to extend the spectral response of the radiation curable fluid.

25. A method according to any preceding claim, wherein the fluid comprises ink jet ink.

26. A method according to claim 25, further including applying the ink to a substrate using an ink jet printing technique.

27. A method according to any preceding claim further including the step of varying the power of the radiation source.

28. A method of curing a radiation-curable fluid, the method including emitting radiation from a radiation source towards the fluid to be cured, wherein at least 90% of the radiation has a wavelength in a band having a width of less than 50nm.

29. Ink including at least one radiation-polymerisable monomer, oligomer or prepolymer and a photoinitiator system containing a photoinitiator wherein the photoinitiator system is adapted to absorb radiation having a wavelength between from 280 to 450nm and to absorb sufficient radiation within a 50nm band width to effect cure of the ink.

30. Ink according to claim 29, wherein the ink is substantially free of water and volatile organic solvents.

31. Ink according to claim 29 or claim 30 further including at least one colouring agent.

32. Ink according to any of claims 29 to 31, wherein the photoinitiator system further includes a photosensitiser.

33. An ink according to any of claims 29 to 32, wherein the ink is an ink jet ink.

34. An ink according to any of claims 29 to 33, wherein the photoinitiator system is adapted to absorb sufficient radiation within a 30nm, preferably within a 20nm band width to cure the ink.

35. An ink according to any of claims 29 to 34, wherein the photoinitiator system comprises a radical photoinitiator selected from 1-hydroxycyclohexyl phenyl ketone, 2-benzyl-2-dimethylamino-(4-morpholinophenyl)butan-1-one, benzildimethylketal, bis(2,6-dimethylbenzoyl-2,4,4-trimethylpenylphosphine oxide and mixtures thereof;

or a cationic photoinitiator selected from a diaryliodonium salt, a triarylsulphonium salt and mixtures thereof;

or one or more photoinitiators together with a photosensitiser selected from ketocoumarins, thioxanthone and mixtures thereof.

36. Apparatus for curing a radiation-curable fluid, the apparatus including

a radiation source for emitting radiation towards the fluid to be cured, wherein at least 90% of the radiation has a wavelength in a band having a width of less than 50nm; and

means for providing an inerting environment in the region of the radiation source.

37. Apparatus according to claim 36, wherein the radiation source comprises an LED.

38. Apparatus according to claim 36 or claim 37, wherein the source is adapted to emit UV radiation.

39. Apparatus according to claims 36 to 38, wherein the apparatus includes an array of sources.

40. Apparatus according to any of claims 36 to 39, including an elongate source of radiation.

41. Apparatus according to claim 40, wherein the source comprises an array of LEDs and is arranged to move relative to the ink to be cured in a cure direction, wherein the LEDs do not form a column substantially aligned with the cure direction.

42. Apparatus according to any of claims 36 to 41, including a plurality of rows of LEDs, wherein a row of LEDs is offset from an adjacent row of LEDs.

43. Apparatus according to claim 42 wherein the source comprises N rows of LEDs, the LEDs of each row having a pitch of w along the row direction, and wherein each row of LEDs is offset by Yw/N from an adjacent row, wherein Y, w and N are integers.

44. Apparatus according to any of claims 36 to 43, including a reduced oxygen gas source.

45. Apparatus according to any of claims 36 to 44, including a nitrogen source.

46. Apparatus according to any of claims 36 to 45, further including a printhead, wherein the arrangement is such that the inerting environment is not provided in the region of the printhead.

47. Apparatus according to any of claims 36 to 46, further including a shroud in the region of the radiation source.

48. Apparatus according to any of claims 36 to 47, including means for providing a gas curtain in front of the source.

49. Apparatus according to any of claims 36 to 48 including an outlet for the gas, wherein the outlet is directable.

50. Apparatus according to any of claims 36 to 49, including a gas outlet adjacent the source for supplying gas at a positive pressure in the region of the source.

51. Apparatus according to any of claims 36 to 50, including a cavity, the source being mounted in the cavity, the apparatus including means for positively pressurising the cavity.

52. Apparatus according to any of claims 36 to 51 including means for cooling the source of radiation.

53. Apparatus according to claim 46 including one or more of the following:

a) a fan;

b) a heatsink; and

c) a cooling fin.

54. Apparatus according to any of claims 36 to 46, wherein the fluid is ink.

55. Apparatus for curing radiation-curable fluid, the apparatus including a radiation source for emitting radiation towards fluid to be cured, wherein at least 95% of the radiation emitted from the source has a wavelength in a band having a width of less than 50nm.

56. Apparatus according to any of claims 36 to 55, wherein the fluid is adapted such that it is reactive when exposed to radiation of a predetermined wavelength.

57. Apparatus according to any of claims 36 to 56, further including an ink jet printhead for emitting ink onto a substrate.

58. A printer including apparatus according to any of claims 36 to 57.

59. A printer according to claim 58 wherein the radiation source is moveably mounted in the printer.

60. A printer according to claim 58 or claim 59, wherein the printer comprises an ink jet printer.

61. An array of light emitting diodes adapted for use in curing ink in an ink jet printer.

62. A method being substantially as herein described having reference to one or more of the accompanying Figures 1 to 9.

63. Apparatus being substantially as herein described with reference to and illustrated by one or more of the accompanying Figures 1 to 9.

64. Ink being substantially as herein described.